Human TPPP3 Protein (His Tag)

Catalog Number: **14360-H07E**

General Information

Gene Name Synonym:

CGI-38; p20; p25gamma; TPPP/p20; TPPP3

Protein Construction:

A DNA sequence encoding the mature form of human TPPP3 (Q9BW30) (Met1-Lys176) was expressed with a polyhistide tag at the N-terminus.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 85 % as determined by SDS-PAGE

Endotoxin:

Please contact us for more information.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: His

Molecular Mass:

The recombinant human TPPP3 consists of 191 amino acids and predicts a molecular mass of 20.8 KDa. It migrates as an approximately 21 KDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

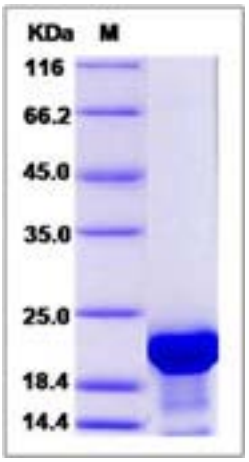
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

TPPP3, a member of the Tubulin polymerization-promoting protein family, is an intrinsically unstructured protein that induces tubulin polymerization. TPPP3 is a marker in the developing musculoskeletal system. In tendons, Tppp3 is expressed in cells at the circumference of the developing tendons, likely the progenitors of connective tissues that surround tendons: the tendon sheath, epitenon, and paratenon. Tppp3 is also expressed in forming synovial joints. The onset of Tppp3 expression in joints coincides with cavitation, representing a molecular marker that can be used to indicate this stage in joint transition in joint differentiation. In late embryonic stages, Tppp3 expression highlights other demarcation lines that surround differentiating tissues in the forelimb. Depletion of TPPP3 by microRNA-based RNA interference (RNAi) inhibits cell growth, arrests cell cycles, and causes mitotic abnormalities in HeLa cells. C57BL/6 mice that received subcutaneously injected LLC (Lewis lung carcinoma) cells in which TPPP3 was knocked down showed a pronounced reduction in tumor progression. The migration/invasion activity of TPPP3-knockdown LLC cells was significantly suppressed in a transwell chamber migration assay. When these cells were injected into the tail veins of C57BL/6 mice, they exhibited milder lung metastasis compared with control tumor cells. Taken together, these findings suggested that the TPPP3 gene played an important role in tumorigenesis and metastasis, and it could potentially become a novel target for cancer therapy.

References